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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,033	03/02/2004	James Wilson-MacDonald	1011-001-10316	9744

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EXAMINER

KIM, JOHN

ART UNIT PAPER NUMBER

3733

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/790,033	Applicant(s) WILSON-MACDONALD ET AL.	
	Examiner John Kim	Art Unit 3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 7, 16, 20-24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/7/05</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

Claims 7 and 20-24 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

The disclosure is objected to because of the following informalities: the limitations as named in the claims are not the same names in the drawings, thus making it impossible to distinguish which limitations correspond to a figure element. For example, the mobile joint (claim 4), connecting means (claim 5), releasable clamping means (claim 15), unidirectional gripping means (claim 16) could either be figure references 9, 10, 11 or 12.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "unidirectional force is insufficient" in claim 2 is a relative term which renders the claim indefinite. The term "unidirectional force is insufficient" is not defined

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by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. A limit in the range of the force is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

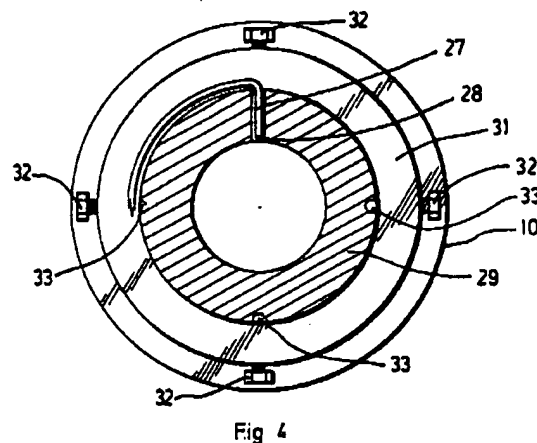
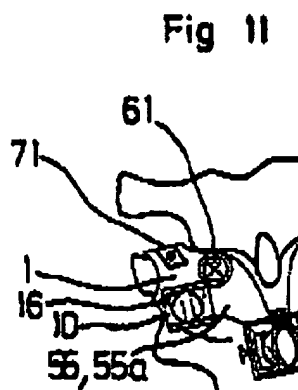
Claims 1, 5, 6, 8-11, 13-15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin (US Pat 562175, in IDS).

In regards to claim 1, 9, Martin discloses of having a unidirectional force generating means (21, 22, a spring), a first attachment means (1, 2, or 3) and a second attachment means (1, 2, or 3 that is adjacent to the first attachment means). (col 12:1-26) Regarding claim 5 and 6, Martin discloses of having a base plate (55 or 55a, col 16:16-27), a connection means (29 via 10 which is part of the plate 55, see fig 11 and 4, see below), which connects the unidirectional force generating means (27, the free end of 21 or 22) to the plate (col 12:29-34). As seen in figure 1, there are two locations where the connecting means can be attached to the base plate (one above and one below) as well as two connecting means. Regarding claim 8 and 17, Martin discloses the use of a biocompatible, "shape-memory metal alloy" for the unidirectional force generating means (col 8:64, col 6:29-36). Regarding claims 10 and 11, Martin discloses to use coiled springs (col 5:55-6:13) or leaf or other springs (col 20:4-5). Regarding

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claim 13, Martin discloses the spring to be either in compression or extension (col 5:62-65) and as discussed above, the springs are placed between the attachment points.

Regarding claim 14 and as seen in figure 1, a plurality of springs is provided and Martin discloses the magnitude of the unidirectional force is determined pre- or intra-operation (col 4:36-41). Regarding claim 15, Martin discloses in figure 4 the releasable clamping means (29, 30, and 31) (col 12:29-50). A screw (32) is used to clamp and release.



Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 3, 4, 12, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US Pat 562175, in IDS).

Regarding claim 3 and 18, Martin discloses the claimed invention except for having a unidirectional force in the range of 0N to 200N and dropping to substantially zero when spring reaches the predetermined length. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the orthopaedic device of Martin with a unidirectional force in the range 0N to 200N and to have a spring with substantially zero force at a predetermined length, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claims 12 and 19, Martin discloses the claimed invention except for having a spring shaped as a C or S and for having a unidirectional force generating means shaped to conform the shape of the vertebrae. It would have been an obvious matter of design choice to one skilled in the art at the time the invention was made to construct the orthopaedic device with a C or S shaped spring and for having a unidirectional force generating means shaped to conform the shape of the vertebrae, since applicant has not disclosed that such solve any stated problem or is anything more than one of numerous shapes or configurations a person ordinary skill in the art would find obvious for the purpose of providing a compression or extension force. *In re Dailey and Eilers*, 149 USPQ 47 (1966).

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Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US Pat 5672175, in IDS) in view of Saurat et al. (US Pat 6296644).

Martin discloses the claimed invention except for having one of the attachment means comprising a mobile joint. Saurat discloses of having an orthopaedic device with a ball-and-socket joint (considered as a mobile joint) (figure 1, col 1:61-63). This allows the device to be "extremely flexible and can be easily adapted to the anatomies of the spinal segments without exerting a substantial force on the patient, and can be maintained with the desired angulation by use of rings..." (abstract). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the orthopaedic device of Martin with a mobile joint in view of Saurat in order to provide an orthopaedic device that is easily adaptable to the patient without exerting substantial force.

Allowable Subject Matter

Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 for art cited of interest.

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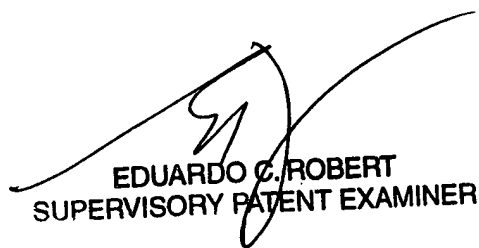
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is (571) 272-2817.

The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JK


EDUARDO C. ROBERT
SUPERVISORY PATENT EXAMINER